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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,399	03/16/2001	Howard B. Goldman		3582

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EXAMINER

NGUYEN, THU V

ART UNIT	PAPER NUMBER
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3661

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/809,399

**Applicant(s)**

GOLDMAN, HOWARD B.

**Examiner**

Thu Nguyen

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

The response filed on March 31, 2004 has been entered. By this response, all claims 1-26 are now pending in the application.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art (AAPA hereinafter) (specification page 9, lines 5-24; page 10, lines 1-22) in view of Solberg et al ("Development of a Conductive-polymer, Composite Direction-Finding Antenna" (IEEE 1999) and McCluskey et al ("Nanocomposite materials offers higher conductivity and flexibility" (IEEE 1998).

As per claim 13, AAPA teaches a well known antenna including an antenna having stacked ground and positive plates arranged to enable receipt of electromagnetic signals (page 9, lines 5-24). AAPA does not teach engaging a positive plate with a polymeric composition containing a random disassociated suspension of conductive metal particles. However, Solberg suggests using a conductive polymer composite for manufacturing antenna (page 1966, first &

third paragraphs), and McCluskey teaches producing conductive polymer composite by adding conductive particles to non-conducting polymer (page 283, first column). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the conductive polymeric composition in fabricating the conventional antenna of the AAPA in order to enhance sensitive conductivity for the antenna.

As per claim 14, since Solberg teaches that the composite of polymeric with metal particles permit assignment of different level of conductivity desired (page 1966, third paragraph), Solberg further teaches making different antenna parts from conductive polymeric compound (page 1966, last two paragraphs), encasing the antenna using suitable conductive polymeric material that enables electromagnetic waves to be conducted would have been obvious. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to encase of the antenna of the AAPA using polymeric composite material with desired level of conductivity, since shaping the electromagnetic conductive material of Solberg in an encased shape as preferred by the designer requires only routine skill in the art.

As per claims 15-17, the claimed internal structure of a GPS antenna would have been known.

As per claim 18-20, 25, Solberg does not explicitly teach selecting a specific material for the polymeric and conductive metal as claimed. However, Solberg teaches that the conductivity

of the composite varies depending on the values of materials (page 1966, first three paragraphs), further, a metal composed of magnesium carbonate, and a non-conductive material including an epoxy, etc would have been known conductive/non-conductive materials. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to select the magnesium carbonate, since selecting a specific known material for a conductive metal device to adjust conductivity capability according to a particular need requires only routine skill in the art.

As per claim 21-24, and 26, applicant's admitted prior art in view of Solberg do not explicitly disclose an exterior surface as claimed. However, selecting a specific outer surface to facilitate mounting an antenna to a selected position requires only routine skill in the art.

3. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herring (US 6,211,823) in view of AAPA and further in view of Solberg et al ("Development of a Conductive-polymer, Composite Direction-Finding Antenna" (IEEE 1999) and McCluskey et al ("Nanocomposite materials offers higher conductivity and flexibility" (IEEE 1998).

As per claim 1, Herring suggests implementing an antenna underside of the vehicle (col.3, lines 41-49; col.4, lines 19-31). Herring does not explicitly teach the wireless communication means, the GPS signal processor, and a GPS antenna having the polymeric composite of conductive materials as claimed. However, including the wireless communication means, the GPS signal processor for processing the GPS signal received from the GPS antenna would have been well known. Further, refer to claim 13 above for the discussion of the GPS

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antenna. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the well known wireless communication means, the GPS signal processor to the device of Herring and to replace the antenna of Herring with the antenna with the cover made of polymeric composite of conductive materials of Braut in order to enhance electromagnetic signal conductivity of the antenna of Herring.

As per claim 2-5, 10-12, conducting the communication between the GPS antenna and satellites when needed, and tracking the position of a vehicle through connection with the Internet would have been well known. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to conduct a known wireless communication with the satellites only when position data is needed to save power consumption.

As per claim 6-9, refer to claim 1 above. Further, using a magnet as a means for attaching the antenna to the vehicle would have been obvious, since selecting a known attaching means to attach a device to a metal surface requires only routine skill in the art.

### ***Response to Arguments***

The Declaration under 37 CFR 1.131(b) has been considered. In view of the declaration, a new ground of rejection has been established.

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Unexpected filing of the Declaration filed on March 31, 2004 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

**Any response to this final action should be mailed to:**

Box AF

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 305-7687, (for formal communications; please mark "EXPEDITED  
PROCEDURE")

Or:

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(703) 305-7687 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park V, 2451 Crystal  
Drive, Arlington. VA., Seventh Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the  
examiner should be directed to Thu Nguyen whose telephone number is (703) 306-9130. The  
examiner can normally be reached on Monday-Thursday from 8:00 am to 6:00 pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
supervisor, Thomas Black, can be reached on (703) 305-8233. The fax phone number for this  
Group is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the Group receptionist whose telephone number is (703) 308-1113.



**THU V. NGUYEN**  
**PRIMARY EXAMINER**

June 22, 2004